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Winter 4-4-2020

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Igbokwe Patrick Chijioke

University of Nigeria, Nsukka, patrick.igbokwe@unn.edu.ng

Nwafor Michael Chigozie

University of Nigeria, Nsukka, michael.nwafor@unn.edu.ng

Igbokwe Josephine C

University of Nigeria, Nsukka, igbokwe.josephine@unn.edu.ng

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Chijioke, Igbokwe Patrick; Chigozie, Nwafor Michael; and C, Igbokwe Josephine, "Utilization of E-reference Services by Students with Disabilities in the Federal University Libraries in the South East, Nigeria." (2020). *Library Philosophy and Practice (e-journal)*. 3878.
<https://digitalcommons.unl.edu/libphilprac/3878>

Utilization of e-reference services by students with disabilities in the Federal University Libraries in the South East, Nigeria.

By

Igbokwe Patrick Chijioke Patrick, igbokwe@unn.edu.ng NAL, UNN

Nwafor Michael Chigozie, Michael.nwafor@unn.edu.ng NAL UNN

&

Igbokwe, Josephine C, Josephine.igbokwe@unn.edu.ng NAL, UNN

Abstract

The purpose of this study was to explore the utilization of e-reference services by the students with disabilities in federal universities in the South East, Nigeria. A survey method using interview style data collection method was deemed appropriate than administering a questionnaire. The interview was done with the help of our colleagues in the studied universities. All of the disabled student users were requested to participate in the study. Using interview style method, 207 disabled library users were used. Findings showed that the only e-reference service available to students with disabilities is e-mail e-reference service. It was also found that among all the listed items for the extent of use of e-reference, it was only email service that the respondents use to a very low extent. It was also discovered that the most common constraints faced by disabled student users in terms of utilising e-reference services was that most electronic reference resources are designed for normal users and high cost of buying and equipping electronic reference resources for disabled users. Inability of government to pass disability discrimination act by the federal government among others were also discovered to militate against the use of e-reference services by disabled students. Findings also reveals that People with disabilities should be included in the system design that will facilitate universal accessibility and usability. Further analysis showed that respondents agreed that Web based library services should be introduced to the disabled users. Also, the result showed that the national assembly should enact library act in order to force libraries to have provisions for the disabled user and that the disabled users should be given unsolicited assistance by the library staff.

Introduction:

One of the basic objectives of every library and information centre is to save the time of the user as well as to provide specific information as quickly as possible. The method used for the same involve personal efforts to bring together user and his document. Hence this method of providing personal attention to readers in terms of meeting their specific needs is given the name 'Reference Service' (Ekwelem 2013). According to Dr. S. R. Ranganathan, In the present electronic and communication environment reference service is not only confined to the library service but also to remote users. Jan (2018) asserts that sometimes it is termed

as, electronic reference service, Virtual reference service or digital reference, its main objective is to provide pin-pointed, exhaustive, expeditious service to its information seekers whenever they have a query. In the fast changing technological era, with the advent of internet as powerful medium to provide the information round the clock i.e. 24*7. The internet with its services like e-mail, www, bulletin board services have changed the notion of traditional library into digital library and the traditional services are now called information services. To meet the quick demand of the user, librarians maintain digital collection and also access e resources and provide information in digital mode. With the emergence of digital library and influence of internet, the concept of traditional reference service has transformed into electronic reference service.

When the occasion arises of providing reference and information services to students with disabilities, the service methods of libraries seems to be stumbling and, to a great extent, unable to fetch the right information for students with disabilities. Despite a massive revolution in the technological sphere, librarians feel helpless in providing personal assistance, reader's advisory services and other kinds of services to students with disabilities. Much has been written about how to provide information seeking assistance to students with disabilities but during this study it's been found that they have yet to reach their utmost satisfaction in getting reference and information services from the reference librarians. There are several kinds of barriers for their accessing of information including physical and even psychological. The situation is very crucial for people with visual impairments or low vision and cognitive disabilities. In view of this, Seale, Georgeson, Mamas and Swain (2015), stated that incorporating technologies like Internet Relay Chat (IRC), Multi-user Domain Object Oriented (MOO), and the features of Internet and Web 2.0 are some of the potential tools to provide electronic reference to these patrons. Since traditional libraries cannot offer the required infrastructure to serve them, libraries have started a journey from traditional to electronic in order to accommodate such services.

Electronic reference services are one among so many such types of services that may help students with disabilities information seeking and access. In recent times, a good number of articles have discussed technologies that would enable students with disabilities take full advantage of library services. However, the sad truth is that the proliferation of information does not guarantee its accessibility. Availability does not equate to accessibility. The truth is that people with disability cannot use a library that has been designed for non disabled users. There are various types of disabilities. The World Health Organization (WHO) defined disability as an umbrella term covering impairments, activity limitations and participation

restrictions. In this study, we will be focusing only on students with visual impairment, mobility impairment and hearing impairment.

Statement of Problem

Reference librarians truly enact the role of a connecting bond between information contained in documents and its users as well as beneficiaries. But when the occasion arises of providing personalized and reader's advisory service to people with special needs, they seem to have the ground snatched away at once since the majority of reference librarians find themselves unable to use their previous experiences. The ideal electronic reference can be described as a services by which people can submit their questions and have them answered by a library staff (reference librarian) through some electronic means (e-mail, chat, web forms, etc.) thereby getting the full benefits of the latest information in both print and digital formats.

However, Nigerian University Libraries have been criticized on the grounds that people with disabilities are not provided for by the libraries. Also, preliminary investigations showed that internet use remains beyond the reach of many disabled library users as they are physically and psychologically unfit to do so. Reference Librarians are not helping issues as any help rendered to disabled users is considered as an act of sympathy rather than as a necessary requirement which libraries must provide. Infrastructure is another problem in most libraries in Nigerian Universities. There is hardly any provision of ramps, lifts or any electronic devices that assist wheelchair users to gain entry into the library. For the visually-impaired there is no application software that incorporates all the functions of the section in a DAISY format or talking book.

Also, It was discovered that many university libraries do not have speech recognition software, screen reader software like JAWS etc. including different chat software like IRC, MOO, Web chatting etc. The web has evolved rapidly in recent years, providing the public with access to vast stores of information. However, not everybody is enjoying this. The web creates two potential difficulties for visually impaired persons. First, hypertext web documents are non linear, allowing users to link quickly to other pages that may have a completely different design and layout. This may cause confusion for those who cannot easily follow visual cues. Second, the web now revolves around video, multimedia real – time collaboration, and interactive documents, all of which are heavily visually based.

However, the present study set out to investigate the extent of utilization of e-reference services by students with disabilities in the selected Federal University Libraries in the South East Nigeria.

Purpose of the study

The general purpose of this study is to examine the utilization of e-reference services by students with disabilities. Specifically this study will:

1. Examine the availability of e-reference services available for students with disabilities in university libraries in South East Nigeria.
2. To ascertain the extent of utilization of e-reference services by students with disabilities in university libraries in South East Nigeria.
3. To ascertain the challenges encountered by students with disabilities in accessing e-reference services in university libraries in South East Nigeria.
4. Strategies for enhancing e-reference services for students with disabilities in university libraries in South East Nigeria.

The following research questions will guide the study:

1. What are the available e-reference services for people with disabilities in some university libraries in south east Nigeria?
2. To what extent are e-reference services utilized by students with disabilities in university libraries in south east Nigeria?
3. What are the challenges encountered by students with disabilities in accessing e-reference services in university libraries in south east Nigeria?
4. What are the strategies for enhancing e-reference services for students with disabilities in university libraries in South East Nigeria?

LITRATURE REVIEW

E-reference services available for students with disabilities

Electronic- Reference services are services that provide users with answers to questions in a computer mediated environment. It refers to a network of expertise, intermediation and resources put at the disposal of a person seeking answers in an online environment (Jan, 2018). According to Chandwani (2018) there are two main types of E-Reference services which can also be useful in serving students with disabilities and they are

: Asynchronous and Synchronous Electronic Reference Service. An asynchronous deal with the type of electronic reference service in which user submits a question and the librarian responds after some time. In other words there is a time delay between the question being posed by the user and the answer being given by the librarian. Asynchronous virtual reference service takes the form of the following: Email reference service, ask a librarian, ask a service reference robots, online path finder. While in the synchronous electronic reference service the exchange of information takes place in 'real time' with an immediate response to the question. Examples are; instant messaging or online chat, Video based reference service, digital reference robots (Chigbu 2015). Therefore, there are commonly-used technological devices for e-reference services students with disabilities which in includes; braille books, talking books, playback machines, audiotapes and screen readers (Epp 2006). Further more, other technological devices for people with disabilities, and particularly the visually impaired, include talking computers and Braille embossers. These findings are similar to those made by Adetero (2012) who observed that libraries that offer e-reference services to people with disabilities have some resources and equipment they commonly used. Some of these commonly-used devices include Braille texts, talking books, playback machines, audiotapes, screen readers and other adaptive devices.

It was observed by these authors (Nassimbeni & De Jager 2014, Majinge & Stilwell 2013) that Libraries in developing countries are beginning to provide assistive technologies as well as reading materials to people with disabilities most notably, libraries have put in place working lifts and ramps to assist with the mobility of people with disabilities (Majinge & Stilwell 2013). Furthermore, information resources in Braille and large print are being procured to enable people with disabilities to access information sources more easily. Libraries are also training selected members of staff on how best to serve people with disabilities (Nassimbeni & De Jager 2014). In a research conducted by (Majinge & Stilwell 2013) observed that students with disabilities stated that they needed resources like Braille books, talking computers and electronic books. Majority indicated that most of these resources were largely not available in their libraries. The latter found that talking books were the most-preferred format in the libraries in Nigeria. Electronic reference service that assist students with disabilities without coming to the four walls of the library shows the relevance this service in the face of poor building infrastructure. Examining access to infrastructure for students with disabilities who shows that the students with disability shows that were

experiencing difficulties in accessing library buildings as some buildings had too many steps leading to the top floors and no lifts

Utilization of e-reference services by students with disabilities

In a research conducted by Chaputula and Mapulanga (2016) shows that that most libraries in Malawi are not offering library services that are tailor-made for people with disabilities. Failure by libraries to provide these types of services implies that people with disabilities face challenges in accessing their services. Harris and Oppenheim (2003) and Hopkins (2000) observed that people with disabilities may have problems in accessing library services, and, therefore, need specialized training.

Training includes induction sessions, marketing, and reference services that ensure that they know the outline of the collection, where to find assistive devices, and where to ask for assistance or conduct searches themselves. Quarless, (2016) is of the view that barrier to access can include a lack of awareness of available technologies and of what can be achieved through their use, a lack of available training in their adaptive use, and a lack of financial resources to purchase the hardware, software, network connectivity and specialized support equipment that may be necessary. Thus, there is a need for initiatives that build awareness, expand digital literacy, finance the acquisition of devices and software, and provide technical support for the use of ICTs for students with disabilities.

Challenges encountered by students with disabilities in accessing e-reference services

The above shows that people with disabilities face numerous challenges when using libraries. Challenges occur because of the lack of equipment to support their accessibility to library and information resources. Similarly, despite an increase in demand, the majority of the libraries do not offer specialized services such as training sessions on equipment use or market their services to the benefit of people with disabilities. This lack impacts negatively on the utilization of the services by people with disabilities. Carter (2004) observed that accessibility issues continue to be at the forefront of library service as the number of college or university students with disabilities, increases and accessing these resources can be difficult for users with disabilities.

The second challenge which visually impaired people face is that most of these technological devices are expensive, making them difficult for many resource-poor libraries to acquire. Studies in other parts of the world have shown that issues that have to do with

accessibility of library buildings, access to information resources, and services tailor-made for people with disabilities are some of the major challenges faced by those with disabilities (Alqaryouti 2010, Das, Kuvini & Desai 2013, Ekwelem 2013).

Williams (2016) opined that the major challenge for persons who are physically challenged is that there is a lack of knowledge about e-reference services and tools, and about other resources available to support them in their studies. Equally supporting the previous authors that cost of technology needed for these services can be a significant barrier to its adoption and such specialized equipment can be particularly expensive.

Strategies for enhancing e-reference services for students with disabilities

Students with disabilities are expected to achieve the same learning outcomes, and conduct the same research, as those without disabilities, they may need extended reference service or special provisions in order to do so. Therefore, they need extensive assistance in identifying and locating research sources. Screen readers, large type or high contrast text and background combinations can accommodate blindness or low vision and Web designers can use descriptive tags to explain images and tables.

Also, Ekwelem (2013) advocate that Web based library services should be introduced to the disabled users and that the disabled should be given unsolicited assistance by the library staff. Library webmasters are continuously trying to make library web sites more user-friendly to individuals with disabilities. (Carter, 2004). A critical component to providing equitable access service is the interaction between students with disabilities and library staff. However, this challenge can be overcome through institutional resource sharing initiatives in which libraries pool resources to acquire the equipment they need.

It was equally pointed out that efforts should be made to ensure that learning institutions such as libraries should have assistive technologies or equipment for people with disabilities before they may be recognized as institutions of learning. These would help ease the challenges that people with disabilities face.

Methodology

The study adopted descriptive survey design. The population comprised 235 (two hundred and thirty five) disabled students from the universities under study. There was no sampling technique. This is because the number is manageable. The focus group interview technique was used as a research tool to elicit information from the respondents. Due to their present

physiological conditions, an interview - style data collection method was deemed more appropriate than administering a questionnaire. Some of the reasons for choosing an interview – style data collection method were that (a) the respondent might not be able to present their thoughts and feelings in a manner they would have liked. And (b), they would have problems indicating their responses on paper. However, the interview- style of data collection was done with the help of some colleagues in the studied universities. First their phone numbers and e – mail addresses were identified from a list of those that attended the disability is a barrier workshop organised by Surplus People in the Universities Research Group, University of Nigeria Nsukka on 9th September, 2019. Contacts were made and some agreed to help the researches with the interview, hence the instruments were sent to them via email and the results of the interviews were collated and sent to the researchers via courier.

Data Analysis

This study examined the utilization of e-reference services by students with disabilities in the Federal University Libraries in the South East Nigeria. Two hundred and thirty five disable students (235) were sampled. Two hundred and five respondents representing 88% of the respondent were interviewed. Twelve (12%) of the total respondents were not interviewed and therefore were not used for the analysis. The reason was that these 30 identified respondents did not make themselves available as scheduled.

The original intention was to collect the data online. However, given the low response rate the researcher might get, it was felt that an interview – style data collection method might elicit a better response rate, and this was indeed the case. The response rate for this survey was 88 percent.

Characteristics of the respondents

From the sample of 205 physically-challenged students, 118, or 57, percent were male and, 87 or 42 percent were female from all the universities under study. Also, for the student's years of study, the result indicates that there are 70 (seventy) student who are in one (100) level, 61 (sixty one) are in two hundred (200) level, forty two (42) are in three (300) level while thirty two (32) are in Four (400) level and above.

Table 1: Distribution of Disabled Students (Visually Impaired and Mobility challenged) in the federal Universities in South-East, Nigeria

S/N	_Federal University	Visually impaired	Mobility impaired	Hearing impaired
1	University of Nigeria, Nsukka	39	21	0

2	Federal University of Technology Owerri	32	17	0
3	Nnamdi Azikiwe University Awka	35	19	0
4	Michael Okpara University of Agricultural Umudike	27	13	0
5	Federal University, Ndifu-Alike, Ebonyi State	21	11	0
	Total	154	81	0

Sources: Various Academic Planning Units of the Studied Universities

Table 2: Frequencies and Percentages of available e-reference services for the students with disabilities in federal universities in the South East

S/N	statement	Available		Not available	
		F	%	F	%
1	e-mail Services	5	100	-	-
2	Web form Services	-	-	5	100
3	AskA Services	-	-	5	100
4	Text- based Chat	-	-	5	100
5	Video conferencing or web-cam Services	-	-	5	100
6	Digital reference robot Services	-	-	5	100
7	Online pathfinder	-	-	5	100
8	Instant messaging	-	-	5	100

In the **table 2** above, the frequency (F) shows the number of universities and the computed percentages (%) e-reference services in them. The highest frequency, which was five (5), shows 100% of the universities surveyed. Any e-reference services that show the frequency five, means that such an item is found in all the six universities surveyed. Other e-reference services were totally not available in these universities with a score of zero (0%) availability.

Table 3: Extent of utilization of e-reference services by students with disabilities

S/N	statement	VHE	%	HE	%	LE	%	VLE	%
1	e-mail Services	15	7.2	21	10.1	27	13.0	144	69.6
2	Web form Services	0	0	0	0	0	0	207	0
3	AskA Services	0	0	0	0	0	0	207	0
4	Text- based Chat	0	0	0	0	0	0	207	0
5	Video conferencing or web-cam Services	0	0	0	0	0	0	207	0
6	Digital reference robot Services	0	0	0	0	0	0	207	0
7	Online pathfinder	0	0	0	0	0	0	207	0
8	Instant messaging	0	0	0	0	0	0	207	0

In table 3: Respondents were asked to rate their extent of use of e-reference services in the universities under survey by choosing from 8 itemized services identified by the researchers from discussions with the respondents. The respondents were asked to rate the itemized services using “Very high extent,” “High extent”, “low extent”, “very low extent”. Table 3, shows that the majority of the respondents, about 144 (69.9) of them use e-mail reference service to a very low extent. Also, the result indicated that they don’t use other e-reference services as itemised by the researchers at all.

Table 4: constraints associated with use electronic reference services for students with disabilities

S/N	Item statement	SA	%	A	%	D	%	SD	%
1	Most electronic reference resources are designed for normal users.	193	93.2	14	6.7	0	0	0	0
2	High cost of buying and equipping electronic reference resources for disabled users	191	92.2	11	5.3	3	1.5	2	0.9
3	Inability of government to pass disability discrimination act by the federal government	167	80.7	37	17.9	2	0.9	1	0.5
4	Due to high development cost and a small market in assistive technology, few industries show little interest in development of the technology.	125	60.4	73	35.3	4	1.9	5	2.4
5	Most university libraries are still unaware of needs of	168	81.1	32	15.5	4	1.9	3	1.4

	the disabled.								
6	Library staff provides services to the disabled from sympathies rather than as their equal rights and would only consider serving them after serving Normal users.	164	79.2	40	19.3	1	0.5	2	0.9

Respondents were asked to identify the obstacles they faced when using the e-reference services, from six obstacles identifies by the researches from discussions with respondents and others. Respondents were allowed to indicate “strongly agree”, “agree”, “strongly disagree”, “disagreed”. Table 4, shows that the most common constraints faced by disabled student users in terms of utilising e-reference services was that most electronic reference resources are designed for normal users (93.2%), followed by High cost of buying and equipping electronic reference resources for disabled users (92.2%). Also, it was indicated that “most university libraries are still unaware of the needs of the of disabled student users (81.1%) followed by” Library staff provides services to the disabled from sympathies rather than as their equal rights s”(79.2%). The finding also showed that the respondents did view the high development cost and the small market in assistive technology as a constraint (60.4%).

Table 5: strategies for improving the usage of electronic reference services for students with disabilities.

S/N	Item statement	SA	%	A	%	D	%	SD	%
1	Web based library services should be introduced to the disabled users.	191	92.3	13	6.3	2	0.9	1	0.4
2	The national assembly should enact library Act in order to force libraries to have provision for the disabled.	187	90.3	16	7.7	2	1.5	2	0.9
3	The library should raise awareness of the electronic reference services as affects, the information needs and the rights of people living with disabilities.	169	81.6	30	14.5	5	2.4	3	1.4
4	The library administrators can organize training programmes for librarians (Reference Librarians) and other library staff which will include areas of difficulties facing disabled users	175	84.5	27	13..0	3	1.4	2	0.9

5	The disabled should be given unsolicited assistance by the library staff.	177	85.5	23	11.1	5	2.41	2	0.9
6	People with disabilities should be included in the system design that will facilitate universal accessibility and usability.	198	95.6	7	3.4	2	0.9	0	0

Respondents were asked to identify the strategies that may improve library usage by disabled students ticking strongly agree, agree, strongly disagree and disagree, as displayed in table.5, Findings showed that majority of the respondents (95.6%) believed that People with disabilities should be included in the system design that will facilitate universal accessibility and usability. Further analysis showed that (92.3%) of the respondents agreed that Web based library services should be introduced to the disabled users. Also, the respondents (90.6%) agreed that the national assembly should enact library act in order to force libraries to have provisions for the disabled users. A total of 189(97%) thought that the disabled users should be given unsolicited assistance by the library staff.

DISCUSSION

The result of the study showed that there is nothing on the ground for disabled student to participate fully in the ongoing technology exploits. It was found that the only e-reference service available was e-mails services. Others services as indicated in table 2 were not available and these have not been fully put to use.). The result is in line with the findings of (Majinge & Stilwell 2013) that majority and most of these e-reference services were largely not available in their libraries. Also, the result disagrees with the opinion of Adetero (2012) who observed that libraries that offer e-reference services to people with disabilities have some resources and equipment they commonly used. Some of these commonly-used devices include Braille texts, talking books, playback machines, audiotapes, screen readers and other adaptive devices.

On the utilization of e-reference services, the result indicated that it was only email service that the respondents agreed that they use to a very low extent and that they rarely use other services as indicated in table 3. The findings collaborates the work of Quarless, (2016) who is of the view that barrier to access can include a lack of awareness of available technologies and of what can be achieved through their use, a lack of available training in their adaptive use, and a lack of financial resources to purchase the hardware, software, network connectivity and specialized support equipment that may be necessary

On the issues of constraints associated with use of electronic reference services, all the respondents favoured all the items. The result is in line with findings of (Alqaryouti 2010, Das, Kuvini & Desai 2013 and Ekwelem, 2013), these scholars observed that studies in other parts of the world have shown that issues that have to do with accessibility of library buildings, access to information resources, and services tailor-made for people with disabilities are some of the major challenges faced by those with disabilities.

The data in Table 5 shows strategies for improving the use of electronic reference services. The result indicated that people with disabilities should be included in the system design that will facilitate universal accessibility and usability, Web based library services should be introduced to the disabled users, the national assembly should enact library Act in order to force libraries to have provision for the disabled among others. The result collaborates with the work of Ekwelem (2013) who advocates that Web based library services should be introduced to the disabled users and that the disabled should be given unsolicited assistance by the library staff

CONCLUSION

The availability of new information technology among the disabled compared to non-disabled and non-disabled student users has highlighted a digital divide that separates Students who are able to access electronic resources from those who have no opportunity to do so. Empirical evidence on disabled users in south east Nigeria has demonstrated that despite the rapid innovations in communication technology which have drastically transformed services in the libraries. Some people mostly the disabled are at a severe disadvantage in accessing electronic resources. The division has the potential to enlarge the existing educational gap between the disabled and non-disabled students.

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